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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,232	08/18/2003	Jens Garner	442-194	3305

7590 11/15/2005  
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EXAMINER

RUTLAND WALLIS, MICHAEL

ART UNIT	PAPER NUMBER
2835	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/643,232	GARNER ET AL.	
	Examiner	Art Unit	
	Michael Rutland-Wallis	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/13/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: page 3 line 27-28 "It is a question in this case" this language usage is unclear to the examiner what the question is or what applicant is intending by the phrase.

Appropriate correction is required.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the control module as a separate component connected or adapted to be connected with the control module, by way of Ethernet or in a wireless manner must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 1 line 5 "with such common bus system" this limitation is unclear and ambiguous and is requested to be changed to read "with the common bus system".

Claim 3 recites the limitation "the modules" in line 3. There is insufficient antecedent basis for this limitation. In the independent claim 1 which from which the claim depends has both servicing modules and a control module this renders the claim indefinite.

Claim 8 recites the limitation "the display and operating unit" in line 1-2. There is insufficient antecedent basis for this limitation.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipation by Wolf et al. (U.S. Pat. No. 5,616,965).

While the definition of a servicing module does not appear to <sup>be</sup> expressly defined in the specification the examiner of record understands a servicing module to be a either value module, filter module, distributing module, adapter module, pressure controller or switching valve module based on page 3 line 25 – page 4 line 9 of the specification and is therefore treated as such in this office action.

With respect to claim 1 Wolf teaches a pneumatic arrangement seen in figure 1. Which comprises a plurality of servicing modules (items 10, 11, 12 see column 3 lines 20-35 where Wolf teaches the modules are used in for pressure control) for the preparation of compressed air, which are arranged on a common bus system (item 1), and a control module (item 8) connected with the bus system for the performance of control functions for the servicing modules. Wolf teaches a valve arrangement (items 16-18 valves arranged on the bus) connected to the common bus system. The control module (item 8 transmits signals to the modular control elements for valve control, column 3 lines 9-11) is designed for the implementation of control functions for the valves of the valve arrangement together the servicing modules and the valve arrangement constitutes a subassembly (items 5,6,7 adjustment units).

With respect to claim 2 Wolf teaches the valves and the servicing modules are arranged in a row on the common bus system (see figure 1).

With respect to claim 3 Wolf teaches the bus system (item 1) is designed in the form of a bus conductor bar (as item 1 is a electro-pneumatic bus which contains signal lines it is seen as the form of a bus conductor bar), which preferably comprises individual bar elements (items 5,6,7 adjustment units) able to be plugged or attached together (Wolf teaches the use of connectors 30-32), the servicing modules and the valve arrangement being able to be arranged in a row with the bus conductor bar (see figure 1).

With respect to claim 4 Wolf teaches the control module is arranged as a separate module (seen in figure 1 the module congaing item 9 and 8) on the bus system or on the valve arrangement.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al. (U.S. Pat. No. 5,616,965) in view of Barberis et al. (U.S. Pat. No. 6,250,721).

With respect to claim 5 Wolf teaches the servicing module is arranged between the valve arrangement (items 16-18 valves arranged on the bus) and the controlling modules, but does not teach the control module is arranged between the valve arrangement and the servicing modules. Barberis teaches the arrangement see in figure 4 of a control module (Fig.4 item ECU) arranged between the valve arrangement (Fig. 4 items SC, PBR, EMA, BC2 BC1) and the servicing modules (Fig. 4 item IC isolation valve or VSS a pressure controller). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the location of the components in Wolf to speed communication between modules.

With respect to claim 6 Wolf does not teaches an electrical adapter module is arranged between the valve arrangement (items 16-18 valves arranged on the bus) and the servicing modules (items 10, 11 and 12) on the bus system. Barberis teaches a pneumatic adapter module (Fig. 4 item ECU the ECU takes air in through port f adapt idly connects the air reservoir to the valve arrangement) arranged between the valve arrangement (Fig. 4 items SC, PBR, EMA, BC2 BC1) and the servicing modules (Fig. 4 item IC isolation valve or VSS a pressure controller) on the bus system. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the location of the components in Wolf to speed communication between modules.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al. (U.S. Pat. No. 5,616,965) in view of Wittmer et al. (U.S. Pub. No. 20030130805). Wolf teaches an interface to control electronics (item 4) but is silent on type of interface system. Wittmer teaches a pneumatic system seen in figures 1 and 2 where a field bus

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interface is used to interface an external system. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolf to use a field bus interface in order to access and program the control module.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al. (U.S. Pat. No. 5,616,965) in view of Nagai et al. (U.S. Pat. No. 5,884,664). Wolf teaches an interface to outside control electronics (item 4) but is silent on type of interface system. Nagai teaches pneumatic control system where an interface system between a control and an outside apparatus is done through wireless communication. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolf to use wireless transmission as a means to interface outside control module in order to have a remote control terminal.

Claims 9-11 rejected under 35 U.S.C. 103(a) as being unpatentable over Wolf et al. (U.S. Pat. No. 5,616,965) in view of Wood et al. (U.S. Pat. No. 5,788,339).

With respect to claim 9 Wolf teaches the valves of the valve arrangement are at least partly provided with pressure sensors (column 3 lines 27). Wolf does not teach the output signals are transmitted back to the bus system. Wood teaches a pneumatic control system with a control module where sensors transmit signals back to the control module by way of a bus, column 15 lines 39-43 valve feedback signals. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolf to transmit signals back to the control module in order to provide the controller with the information for indication purposes.



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With respect to claim 10 Wolf teaches the valves of the valve arrangement are at least partly provided with pressure sensors (column 3 lines 27). Wolf does not teach the output signals are transmitted back to the bus system. Wood also teaches a diagnostic means (column 15 lines 39-53 diagnostics message generated from valve feedback signals) incorporated into the control module for pneumatic valves. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolf to include the diagnosis means in order to inform the user of a problem.

With respect to claim 11 Wolf teaches the arrangement of claim 1 but does not teach an acoustic message alarm indicating means for diagnostic messages. Wood teaches a pneumatic control system where a control unit is programmed to give a visual or audible message for the purpose of diagnosis (column 15 lines 54-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Wolf to include the use of a indication means in order to inform the user of a problem.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Frisch (U.S. Pat. No. 5,823,088) teaches a similar pneumatic control system to apparatus of claim 1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-

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272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MRW

  
**LYNN FEILD**  
**SUPERVISORY PATENT EXAMINER**  
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